



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/927,479 | 08/13/2001 | Yukihiko Sakashita | 35.C15679 | 6135 |

5514 7590 05/05/2004
FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

NGUYEN, CHANH DUY

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2675

9

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

2

Office Action Summary

Application No.

09/927,479

Applicant(s)

SAKASHITA, YUKIHIKO

Examiner

Chanh Nguyen

Art Unit

2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-14 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment filed on February 09, 2004 has been entered and considered by examiner.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe (JP-65528) in view of Kuriyama (U.S. Patent No. 6,535,224).

As to claim 1, Watanabe discloses a display device as recited in claim 1 with exception of specifically describing the term luminance. For example, Watanabe teaches a light source (410) for emitting a light, a light modulation element (461-463, 413-416) for modulating the emitted light. Watanabe teaches an picture signal inputting means (420, 430 and 450) for receiving a picture signal for outside and inputting a driving signal for driving the light modulation element to the light modulation element, in which the light modulation element modulates the light based on the picture signal and an image is displayed. Watanabe teaches the picture signal inputting means including a target light amount calculating means (e.g., calculating the change in

Art Unit: 2675

the brightness of the screen; see page 19, lines 16-20) and a light amount controlling means (1006), the target light amount calculating means (1005) being means for calculating an adequate light amount for an image display and the light amount controlling means (1006) for receiving the signal from the target light amount calculating means (1005) and controlling the light so as to obtain a target light amount.

Watanabe teaches that "so that the light of the liquid crystal is more attenuated with the lamp is bright, or is less attenuated when the lamp is dark" (see page 22, second paragraph). Watanabe further teaches that "amplification rates can be set for the individual inversion amplifier 1003 , so that the amplifier can correct the sensitivity of each photosensor which differs depending on the color" (see page 27 , second paragraph). Thus, there is at least two input ranges (bright and dark in Watanabe) plus inversion amplifier (1003) for changing (or amplifying) input-output conversion characteristic according to an output of the target light amount calculating means (calculating the brightness of the screen, see page 19, lines 16-20). The only thing Watanabe does not mention is the term "luminance". In the same field of endeavor, Kuriyama teaches the use of amplifier to control the high luminance or low luminance of the driving signal as recited in the claim (see column 7 , line 51 through column 8, line 25 and column 10, lines 3-57). Therefore, it would have been obvious to one of ordinary skill in the art at the invention was made to have used amplifier as taught by Kuriyama to the light source control/image signal correction circuit so that a sufficient resolving power of gray scales is given to the dark picture (see column 2, lines 23-40 of Kuriyama).

As to claim 2, Kuriyama clearly teaches multi gradation processing as recited in the claim (see column 11, line 63 through column 12, line 13).

As to claim 12, this claim differs from claim 1 only in that the term factor is additional recited. This term is so broad that it can read on the amplifier of Kuriyama or even amplifier of Watanabe because any amplifier has a factor so that the input can be changed in response to that factor.

As to claims 13-14, these claims are met by Watanabe and Kuriyama as previously discussed with respect to claims 1 and 12 above.

4. Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe in view of Kuriyama as applied to claim 1 above, and further in view of Hayashi et al (U.S. Patent No. 6,624,862).

As to claims 3-4, not the discussion of Watanabe and Kuriyama above, Watanabe teaches a polarization light flux, but does not mention a rotational position of the light amount adjusting member. Hayashi teaches that "the black level of the projected light is adjusted by rotating the principal axis direction of the phase plate" (see column 5, lines 48-63). Therefore, it would have been obvious to one of ordinary skill in the art at the invention was made to have used the phase plate for adjusting the projected light as taught by Hayashi to the light amount adjusting member of Watanabe as modified by Kuriyama so as to provide a perfect black display with the liquid crystal display.

As to claims 5-6, Hayashi clearly teaches a phase plate (15).

5. Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe in view of Kuriyama and Hayashi as applied to claims 2-6 above, and further in view of Yoshii et al (U.S. Patent No. 5,969,820).

As to claims 7-11, note the discussion of Watanabe, Kuriyama and Hayashi above, none of the Watanabe, Kuriyama and Hayashi mention an ultrasonic motor. The use of ultrasonic motor as the light amount adjusting member is so well-known in the art. For example, Yoshii teaches that an ultrasonic motor or an electromagnetic motor may be used in the driving means (see column 7, lines 1-5). Therefore, it would have been obvious to one of ordinary skill in the art at the invention was made to have substituted the ultrasonic motor as taught by Yoshii to the light adjusting member of Watanabe as modified by Kuriyama and Hayashi so that the high speed light quantity control is assured (see column 7, lines 35-40 of Yoshii).

Response to Arguments

6. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

In view of amendment, the element the target light mount calculating means recited in the claim is now interpreted as the brightness of the screen being calculated as taught by Watanabe on page 19, lines 16-20. Applicant argues that Watanabe is understood to merely control a power source of a light source to correct picture signals according to light source control signals. However, the claims are broad enough to read on the reference of Watanabe with exception of describing the limitation luminance,

Art Unit: 2675

even Watanabe does not mention the term luminance. However, the luminance in the display image is so well-known and is taught by Kuriyama.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chanh Nguyen whose telephone number is (703) 308-6603.

Art Unit: 2675

If attempts to reach the examiner by telephone are unsuccessful, the examiner supervisor, Steven Saras can be reached at 305-9720.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

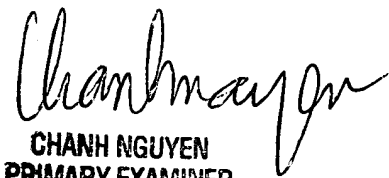
(703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121
Crystal Drive, Arlington, VA, Sixth Floor (Receptionist)

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



C. Nguyen
April 14, 2004


CHANH NGUYEN
PRIMARY EXAMINER